Idaho Currents

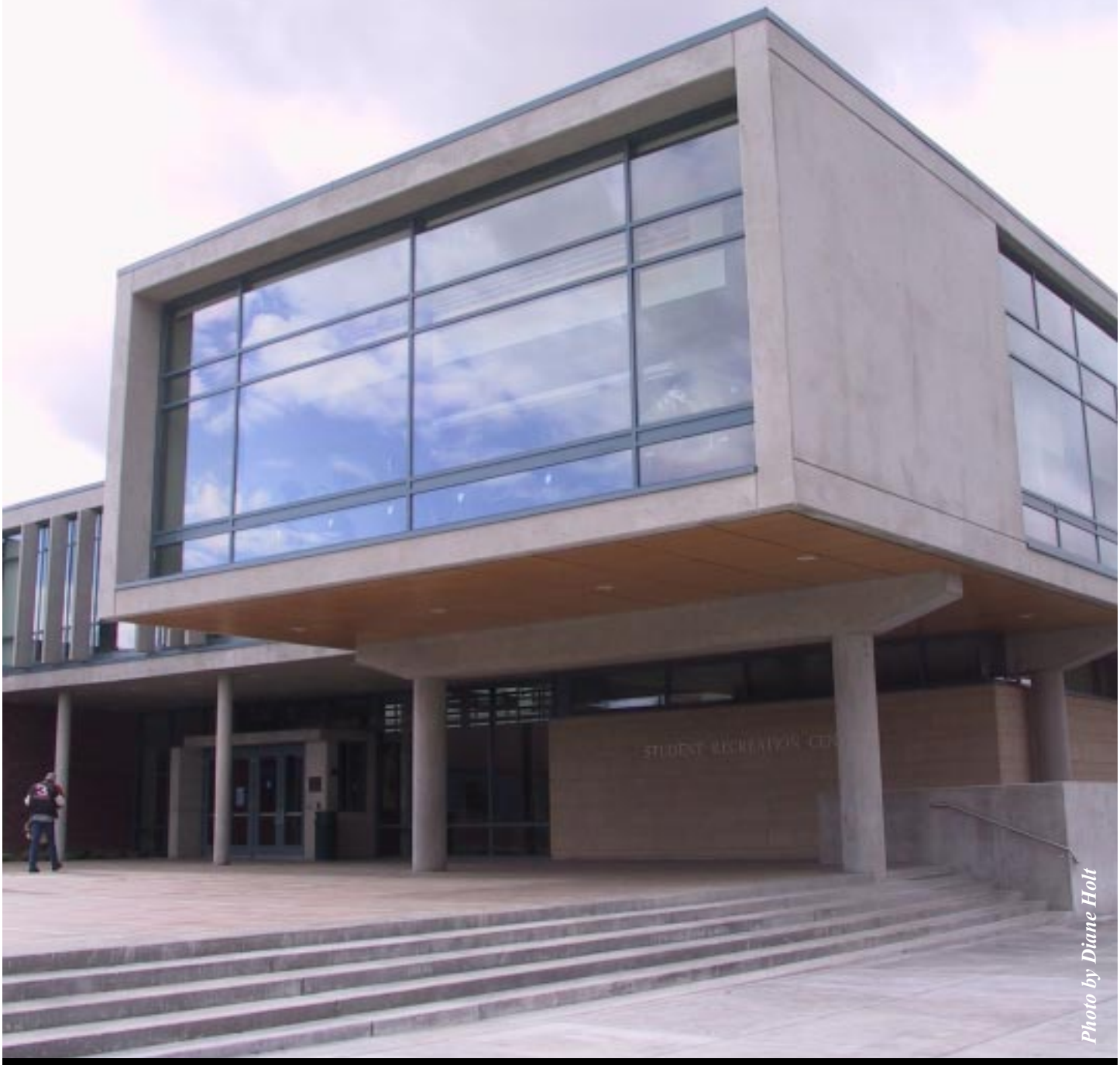

Photo by Diane Holt

Energy and Water News

Vol. 18 Winter 2003

Conference combines ag summit, harvesting clean energy

Two leading Northwest industry events combined efforts to provide their constituents with an opportunity to learn how agriculture and energy can work together.

For the first time the Annual Harvesting Clean Energy Conference and the Idaho Agricultural Summit were held jointly February 10-11 at the Centre on the Grove in Boise. Organizers called the event an ideal occasion for people involved in the agriculture and energy sectors of government, industry, farming, and economic development to find the tools they need to build profitable clean energy projects in rural Northwest communities.

"This conference provided the agricultural community with the opportunity to see and discover first-hand how they can enhance their economic vitality through clean energy power production technologies and techniques," says Brad Hoaglun, organizer of the Idaho Ag Summit.

The conference focused on large- and small-scale wind power, anaerobic digesters, biofuels, and solar- and wind-powered irrigation and stock watering systems. A trade show also featured the latest technologies and practical hands-on information about agriculturally based energy production.

Another key part of the conference addressed on-farm energy. Organizers say on-farm energy involves the process of producing power for on-site use, such as wind for irrigation power, solar for stock watering, and on-farm biogas and geothermal heat for greenhouses and aquaculture.

"This joint conference was designed to meet the changing economic needs of farmers, ranchers, agriculture and rural leaders, tribes, and elected officials across the Northwest," says Rhys Roth, with Climate Solutions in Olympia, Wash., one of the organizers of the Harvesting Clean Energy Conference.

Additional information about the program and the conference is available online at www.harvestcleanenergy.org.

Idaho Currents

Idaho Currents is a publication of energy and water information published by the Energy Division of the Idaho Department of Water Resources.

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On the cover

Boise State University's new 86,000-square-foot Student Recreation Center opened its doors for student use in August just in time for the fall semester.

The new facility offers a myriad of fitness, sport and recreation activities, including a 10,000-square-foot gymnasium and state-of-the-art equipment. The primary focus of the center is drop-in any-time recreation. Special services, such as nutritional counseling and personal training, are also available.

The Associated Students of BSU conceived the idea for the facility in 1995. The goal was to create a state-of-the-art fitness and recreation facility that would attract and benefit the students, faculty, staff and alumni of the university.

Funds for the design, construction, equipment, furnishings, operation and maintenance were totally generated through student fees.

The building was commissioned as a demonstration project by Keithly-Welsh, a commissioning firm from the state of Washington. To learn more about building commissioning, see pages 6-8 in this issue. *(Photos by Diane Holt)*

Energy Division sponsors geothermal trade mission

When most people think of Nevada, they picture lonely hot deserts with cities boasting of their casinos. But Idaho and Nevada share a resource that's right beneath our feet – no need to import!

Nevada holds the largest amount of untapped geothermal resources in the United States, with a potential 2,500 to 3,700 megawatts of electricity (MWe), according to the U.S. Department of Energy. One MWe can provide power to approximately 1,000 homes.

Idaho holds enormous geothermal resources – among the largest in the United States – some of which have been tapped for direct applications and some that are still undeveloped. Idaho ranks seventh among the 50 states in developable geothermal energy, according to the U.S. Geological Survey. These resources could provide up to 20 percent of Idaho's heat and power needs.

Trade mission

In November, a delegation of Idaho's elected officials and geothermal scientists visited the Reno, Nev., area. The purpose of the visit was to learn more about the potential for geothermal in Idaho and to establish a common interest in using geothermal resources for power generation and for direct use applications.

The two-day tour, sponsored by the Energy Division, included 25 people from Idaho and 23 officials from Nevada. By visiting the geothermal power plant and direct use facility, the Idaho delegation became familiar with the uses of geothermal resources and how they can be proponents of new geothermal development in Idaho.

Site tours

The first stop on the tour was the Brady Geothermal Power Plant where geothermal resources are used to operate a double flash plant and a binary generator. These two types of power plants use geothermal water to drive turbines that generate electricity.

The power plant's five production wells produce about 10,000 gallons of geothermal water per minute that range in temperature from 280° to 360° Fahrenheit. These two plants, in conjunction with the Desert Peak Plant to the southeast, have a cumulative production capacity of about 20 megawatts.

The tour continued to the Gilroy Foods plant, which uses some of the geothermal water from the Brady power plant to dry onions. Annually, more than 100 million pounds of raw onions are processed into 20 million to 30 million pounds of dried products ranging in size from powder to ½-inch slices. Most of the onions are grown in California then transported to Nevada, where they are dried and shipped to commercial food companies.

Following the tour, IDWR moderated a panel discussion regarding Nevada's Renewable Portfolio Standards, the Energy Credit Trading System, well construction regulations, and geothermal development on federal lands in Nevada. Panel members included representatives from the Nevada Public Utility Commission, Sierra Pacific Power, Nevada Division of Minerals, and the Bureau of Land Management.

See Energy page 10

Delegates from Idaho and Nevada toured the Brady Geothermal Power Plant near Reno, which uses geothermal water to drive turbines that generate electricity. The Brady plant operates a double flash plant and a binary generator. ***(Photo by Warren Weihing)***

TVRR envisions new biodiesel plant

About 2,500-3,000 gallons of waste cooking oil are dumped into the Payette County landfill every day and at least double that amount is trucked daily to other landfills in southwestern Idaho.

The waste cooking oil comes from vegetable processing plants, fast food outlets and restaurants in the region, says Dennis Codr, Payette County Commissioner.

Codr also serves as spokesman for Treasure Valley Renewable Resources (TVRR), a southwestern Idaho group of businessmen, farmers and investors behind the development of a 15-million gallon per year ethanol plant in Payette County.

Now TVRR is working with the Energy Division to study the feasibility of building a 10-million-gallon-per-year biodiesel plant that could be collocated with its ethanol plant. If it were to come to pass it would be the first-ever commercial biodiesel production facility in Idaho.

B20 program

The Energy Division's B20 Treasure Valley program is designed to stimulate the use of B20 biofuels in Ada and Canyon counties in southwestern Idaho. However, the success of the program has spawned an unexpected but exciting side benefit: the possibility of a commercial biodiesel production plant that makes biodiesel out of waste cooking oil currently being dumped in Idaho landfills.

TVRR officials along with about 20 other biodiesel users or dealers met in December with Wes Berry of W.W. Berry Associates, a national biofuels consulting firm from Lakeland, Florida. The meeting, organized by Dick Larsen, the B20 Treasure Valley program manager, was designed to examine in general terms whether a biofuels production facility might be a logical economic development step in southwestern Idaho.

One step at a time

"The meeting and presentation were specifically intended to be the first step in a long process that has the potential to result in Idaho's first-ever commercial grade biofuels plant," says Larsen.

"There is a lot of surface level excitement about the concept of the plant. But it is critical that a process be established to determine if TVRR can actually take the biofuels production facility from concept to reality."

Collocating a biodiesel production plant with an ethanol plant would allow the facilities to share certain infrastructure elements such as heat, cooling towers, etc. Additionally, ethanol can be used in the production of the biodiesel.

Berry estimates it would cost between $7.5 million and $10 million to build the biodiesel production plant.

TVRR and other officials were enthusiastic following the presentation. They particularly praised the environmentally friendly approach of using what is now a waste product to produce a value added fuel.

"What really makes the biodiesel production plant attractive is its ability to use waste cooking oil as a feedstock," says Codr. TVRR also predicts the plant could bring new jobs to rural southwestern Idaho and possibly yield new property taxes that could benefit the area.

TVRR officials say they will now move forward with more detailed evaluations of the biofuel plant feasibility. They plan a series of meetings with Berry to carefully study every aspect of the proposed biofuels plant.

"What really makes the biodiesel production plant attractive is its ability to use waste cooking oil as a feedstock."

Dennis Codr
Payette County Commissioner

Public, private diesel fleets switch to biodiesel

The Idaho Energy Division's Biodiesel Awareness program has gained significant strength over the past year.

Known officially as B20 Treasure Valley, the program was launched in early 2002 funded by a $30,000 grant from the U.S. Department of Energy. The program has a twofold objective:

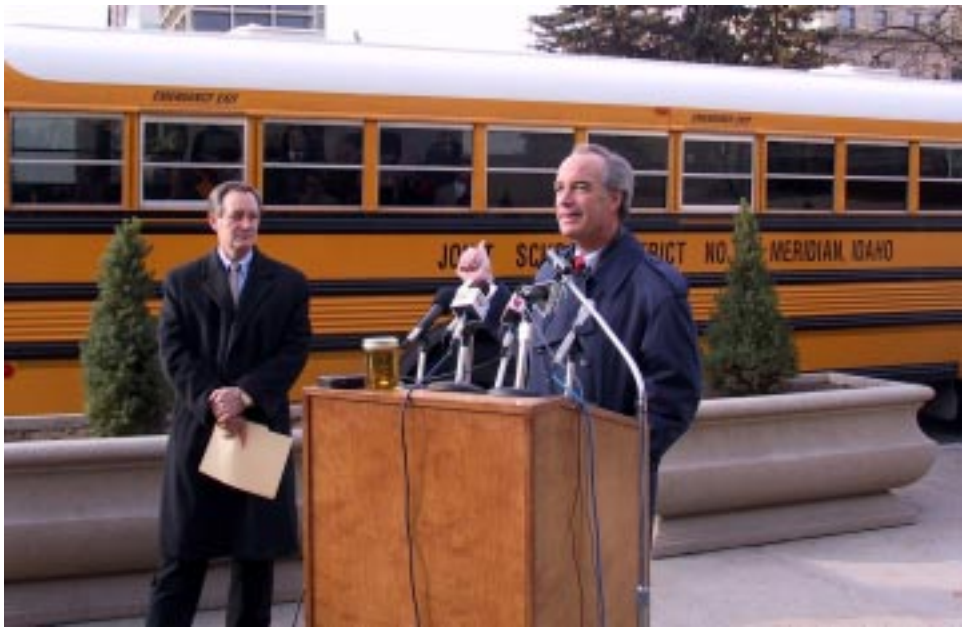
- Develop a strong public awareness of the value of and support for the use of biodiesel fuels as a means to improve air quality and further the use of renewable energy; and
- Initiate and facilitate the use of B20 biodiesel fuel in the private and public sector diesel fleets with the long range goal of stimulating development of a biodiesel production facility in Idaho designed to meet the market demand.

The DOE funds were used to buy down the additional cost of the B20, typically from 14 to 19 cents per gallon. This approach fostered a partnership effort where private and public sector organizations would use B20 because there was no additional fuel cost for them. In exchange, their success with the B20 provided a strong marketing element that could be used to further educate the public and encourage the use of biofuels in Idaho.

Successful strategy

This win-win strategy has proven very successful, according to Dick Larsen, senior public information officer for the Idaho Department of Water Resources, who also serves as the biodiesel program manager.

B20 biodiesel, a blend of 20 percent biofuel and 80 percent petroleum diesel, began being used in southwestern Idaho in April 2002. The



Gov. Dirk Kempthorne speaks at a news conference at the Idaho Statehouse about ways to improve air quality in the Treasure Valley and across the state. To the left of the governor is U.S. Senator Mike Crapo, who also spoke. The Meridian School District bus represents the district's fleet that runs on a blend of 20 percent biofuel and 80 percent diesel. ***(Photo by Linda Cawley)***

B20 fuel was purchased from World Energy Alternatives then mixed and delivered by United Oil of Caldwell. It is now being used in a variety of high profile public and private sector roles.

These include six Meridian School District school buses, six garbage and recycling trucks from the Sanitary Services Company in Meridian, and emergency response vehicles operated by the Idaho Department of Transportation. The program also included a consumer class diesel user partner. Gary Moles of Nampa drives a diesel Volkswagen Golf and a diesel Chevrolet pickup and has agreed to operate both vehicles on B20.

A commuter bus fleet, Treasure Valley Transit, started using the B20 in six of its buses and operated about 10 months without problems. TVT then dropped out of the program after one of their oldest buses developed minor fuel leak problems.

Biodiesel experts say these types of leaks are not uncommon in older vehicles still using natural rubber fuel system gaskets and fittings when they are switched to B20. They are easily fixed by switching to synthetic material fittings and hoses.

In mid-summer, BriCo of Idaho, a fuel dealer in Twin Falls, contacted Larsen about extending the B20 program to the Magic Valley. One of its clients had heard about the southwestern Idaho program and wanted to begin using B20 in the Twin Falls area. After a meeting with Larsen for a presentation about the program, Trans IV, a rural public transfer company in Twin Falls, immediately switched all 24 of its buses to B20.

By year's end, more than 47,500 gallons of B20 had been burned in Idaho. More importantly, the

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It's like ordering a car from the factor

By Mike Purcell, Energy Specialist

How many people would buy a car without reading reviews, talking to other car owners, or test-driving the car? For the vehicles you drive regularly, can you tell when they are working well?

Many people, even if they can't solve the problems themselves, at least realize when something is wrong. But few people know what good performance or value is in a building. Even fewer know how to get it.

In the last 50 years, Americans have gone from spending nearly half their time indoors to spending nearly 90 percent in buildings. As a result, the quality of the buildings has become much more important. The health (or lack) a building fosters in its users has implications in labor costs, legal risk, and overall morale.

Consequently, the systems in buildings have become more integrated and complicated. Typically they do not receive the attention they deserve because the design and construction process has not changed to address the increased complexity. Building systems include heating, venting and air conditioning; fire and security alarms, lighting, water heating and cooling towers.

As a result, even brand new buildings frequently end up costing the owners more than necessary in productivity losses, energy costs, maintenance, and even liability.

System features

Go back to the car analogy. If you bought a new car, say a Honda Accord or Ford Taurus, and the mileage was 30 percent lower than the sticker on the window said, would you do nothing? What if the air conditioner was blowing on the passenger side, but the air was hot on the driver's side? What if you specified a 10-CD changer, but received a one CD player?

Probably most of you would be back knocking on the dealer's door right away. Yet when it comes to buildings, we frequently have no idea what the mileage should be or how to tell the difference between a one- and a 10-disc CD player.

For these reasons, the use of the building commissioning process, commonly referred to as Cx, has increased around the country. New building Cx is the process of ensuring that building systems are designed, installed, tested, and capable of being operated and maintained according to the owner's operational needs.

New building Cx is the process of ensuring that building systems are designed, installed, tested, and capable of being operated and maintained according to the owner's operational needs.

Mike Purcell
Energy Specialist

Building systems, especially in larger commercial buildings, are difficult to understand, and rightly so. As systems offer more and more features, they tend to become more integrated with other systems. Just as we rely on lawyers and accountants to help us navigate tax law, we need to begin using Cx professionals, or Cx agents, to help us navigate the complicated processes of designing, building, and operating buildings properly.

Usage demands

Cx is not a new concept. It has been used for years in the military. The maiden voyage of a submarine is not the first time welds or engine performance have been checked, nor should it be. The first day of school in August isn't the time to find out the wrong air conditioning equipment was installed or the water heater in the kitchen isn't connected. Life safety systems are even more critical. They may have been installed beautifully, but not meet the usage demands.

At risk in new building construction is incompatible, nonworking, incorrectly installed, or under-performing equipment. Each of these issues can cause delays in building occupancy, increased construction and ownership costs, and headaches for building owners.

In the long term, poorly performing buildings can increase maintenance and operation costs, lower worker productivity, and increase comfort complaints and vacancy rates. More and more building owners are deciding that is too much to risk.

ry – Building Cx means quality work

As Dave Logan of Ada County Operations likes to say, "On time and on budget aren't good enough if buildings aren't working properly. Commissioning helps me win every time. I want to win every time."

A well-designed Cx process begins as early as the design stage. Architects, engineers, and contractors are in general much more accepting of the process when it does not appear to be merely a means of checking up on questionable work. Many realize Cx can help them achieve higher customer satisfaction, resulting in repeat business.

The Cx agent attempts to evaluate the integration and performance of potential systems beforehand to avoid incompatibilities and make sure the design intent of the building is met by the proposed plans. If a proposed system or design cannot meet the owner's expectations, the Cx agent works with the designers to come up with a revised plan.

Once the plans are approved and construction begins, the Cx agent monitors the construction site to ensure the specified systems are installed according to plan. If issues develop, the Cx agent discusses them with all parties, especially the owner. Emphasis is put on meeting the design criteria established earlier.

As construction progresses, systems are inspected and tested according to protocols established during the design phase, again, to ensure the equipment can perform according to design criteria. After the equipment is tested and operating correctly, building staff members are trained in their use and maintenance.

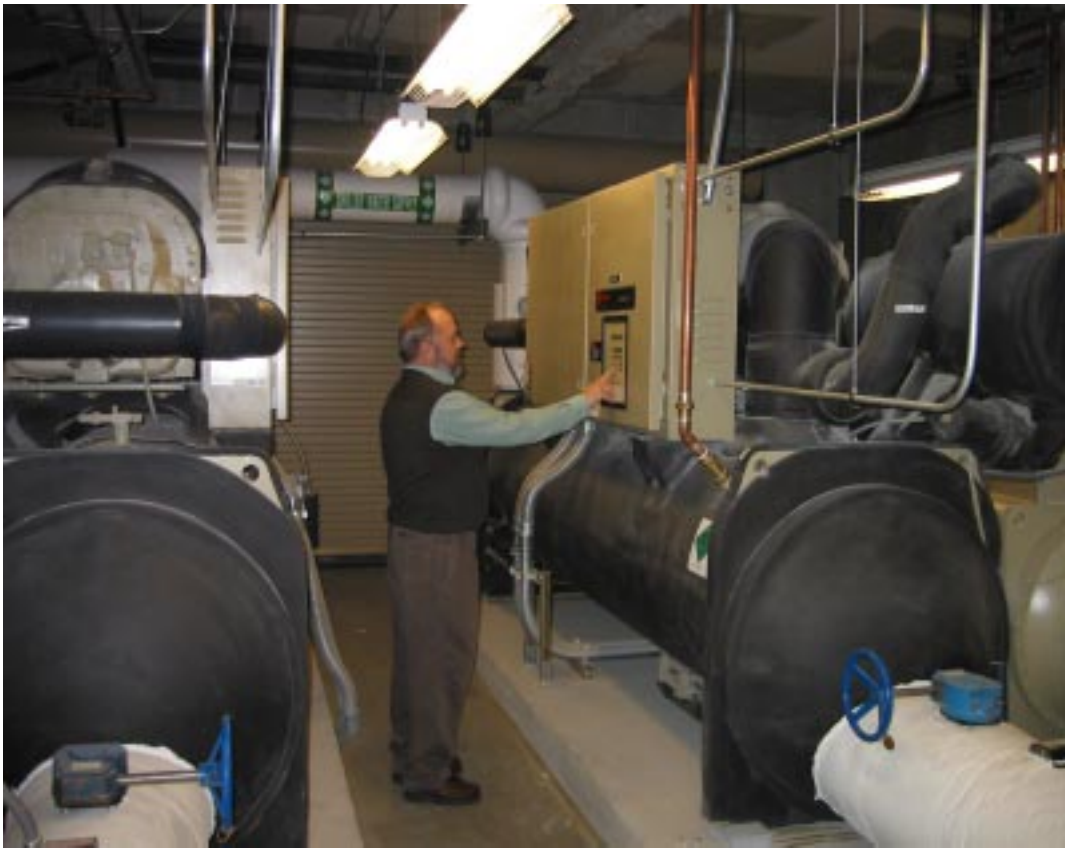
This step is where expertise and knowledge gets handed over to the owners so they can operate the building properly, keeping comfort and performance high and costs low.

Final result

One of the reasons building owners hesitate to use Cx is the perceived extra cost. Some say they should be getting well-designed and functioning buildings for what they are already paying. However, this doesn't happen enough of the time to rely on it. In the brutal low bid construction environment, corners will be cut.

In addition, with the increased sophistication and integration of building systems, it can be difficult for

See Building Cx, page 10



By commissioning the new 350,000-square-foot Ada County Courthouse, Dave Logan, Ada County operations director, knows the building is as energy- and resource-efficient as possible. Although the new courthouse has twice the square footage as the previous building, the county saw a 56 percent reduction in cost per square foot during the first full month of operation compared to the previous year's cost. ***(Photo by Mike Purcell)***

Cx used for three Treasure Valley buildings

The Energy Division coordinated building commissioning for three public buildings in Idaho as part of a project sponsored by the Northwest Energy Efficiency Alliance (NEEA).

The buildings commissioned were the new Boise State University Recreation Center, the new Ada County Courthouse, and the existing Nampa City Hall. The first two used the new building Cx process and the latter used the retro commissioning process.

Case studies on these projects are being prepared. In addition to direct, quantifiable issues, such as energy and facility cost savings, the case studies will also evaluate indirect and non-quantifiable aspects, such as occupant comfort, project schedules, and potential for litigation.

The studies for Idaho and the other states should be available later this spring. For more information, contact Mike Purcell, energy specialist, at mpurcell@-idwr.state.id.us or call the Idaho Energy Hotline, 1-800-334-SAVE.

NEEA is a non-profit group of electric utilities, state governments, public interest groups and industry representatives committed to bringing affordable energy- and resource-efficient products and services to the marketplace.

NEEA sponsors projects in the states of Idaho, Montana, Oregon and Washington. The Energy Division is funded by NEEA to demonstrate commissioning in Idaho as part of a regional effort.

Get 'the whole enchilada' with an energy-efficient home

Building Commissioning is not just for commercial buildings. Idaho has a commissioning system for residences, too.

For a new home, a GemStar^{SM} Home Performance Specialist can review the plans and analyze them for changes needed to bring the home to the Energy Star efficiency performance level. The HPS works with the builder and subcontractors to ensure the insulation, windows, air leakage control, and ductwork are installed according to the program standards.

Finally, performance tests are done on the home's overall freedom from drafts, controlled ventilation, balanced airflow and duct system tightness.

In southwest Idaho, Idaho Energy Star homes are about twice as energy efficient as homes built to the minimum requirements of the new International Energy Efficiency Code. In addition, they have fresh air ventilation, balanced and sealed duct systems for proper air distribution, and are performance tested.

The same services are available for existing homes. The GemStar Home Energy Rating system can help you select and prioritize cost-effective energy efficiency measures, check to make sure they are installed properly and conduct performance testing after installation.

"For new and existing homes, commissioning through the GemStar system is the only way you can know for sure that you are getting an energy-efficient home or remodel," says Ken Eklund, principal energy specialist.

Additional information about the program, Home Performance Specialists and participating builders is available at www.idahoenergystar.com.

Idaho Currents available on-line

2003 marks the 20th anniversary of Idaho Currents. During that time, this publication has experienced numerous changes.

Starting with the Spring 2003 issue, you can receive Idaho Currents electronically. The advantages? Your copy will be in full color and you will help the state of Idaho save on paper, print and mail costs.

For those of you with computers, all that's needed is your name and subscription number as it appears on this issue. We also need your email address. You can change from a printed form to an electronic form at any time.

For those of you who prefer to receive a printed copy, you need not reply to this message.

To receive your electronic copy of Idaho Currents, please email the editor at **lcawley@idwr.state.id.us.** Be sure to provide your name, subscription number and email address.

Public from page 5

the concept of B20 had taken on a new life and was beginning to spin off into other related projects both in the use and production elements.

Reduced emissions

For example, United Oil will open its first public B20 pump this spring at a commercial Phillips 66 service station in western Boise. Besides providing B20 to the general public, the pump will be used to fuel upwards of a dozen recycling vehicles from BFI Waste Services of Idaho operating in Boise residential neighborhoods.

The pump will also supply fuel to other public and private sector diesel fleets that have expressed an interest in switching to B20. This includes the General Services Administration federal diesel fleet in the Boise region, area city and government agencies all of which have various environmental and regulatory interests served by using B20 biodiesel.

The dramatically reduced emission levels of engines running on B20 also caught the attention of the Community Planning Association of Southwestern Idaho. COMPASS does environmental transportation planning for Ada and Canyon counties.

COMPASS planners immediately zeroed in on the potential for a 20 percent cut in harmful air particulates found in diesel exhaust, especially as it relates to use in school buses. Environmental Protection Act statistics show children's lungs are at greater risk from the harmful emissions of diesel engines.

Increasing demand

The COMPASS board, formed from political leaders around Ada and Canyon counties, voted to become an official partner in the B20 Treasure Valley project. At the same time COMPASS went after and eventually received a large federal grant to burn B20 in all 200 school buses in the Meridian School District fleet as follow-on to the initial six buses participating in the B20 Treasure Valley effort. That large COMPASS program will begin this fall.

At the same time, BriCo of Idaho officials in Twin Falls were contacted by other area government and private sector organizations in southern Idaho enthusiastically interested in pursuing the use of B20 in their diesel fleets.

The B20 program in southwestern Idaho also prompted Idaho political and congressional leadership to swing its support behind a greater use of biofuels in Idaho. This was best seen in a special public awareness program held on the steps of the Idaho capital on December 9.

At that event Idaho Gov. Dirk Kempthorne and Idaho U.S. Senator Mike Crapo both called for further development of a strong biofuels economy in Idaho, citing its strong potential benefit to air quality and Idaho economic development. They also announced the first step in a process that could eventually lead to creation of a biodiesel production facility in southwestern Idaho.

"It is clear that 2002 was a pivotal year in our efforts to advance the biofuels agenda in Idaho," says Larsen. "Our first goal was to create the demand for B20. Now it is not only actually being burned in diesel engines on a regular basis, but we also now have clear and strong indications that the demand for biodiesel will continue to grow as B20 becomes more widely accepted."

Twin Falls company supports B20 program

As a federally supported public transportation system, Trans IV Buses has been aware of the biodiesel program since it started in the Treasure Valley and Boise areas.

"We immediately decided to participate with 100 percent of our vehicles as soon as it became available in Twin Falls," says Jim Vining, director of Trans IV in Twin Falls. Some of these benefits include:

1. Public transportation must be a leader in the use of environmentally friendly fuels. One of the primary reasons for our existence is to improve air quality. We believe we have significant effect in this area by reducing the number of individual automobiles on the road (many people riding in one vehicle reduces emissions significantly).

In light of this goal, participation in a program that provides a fuel that improves our emissions by another 20 percent becomes an essential element of our efforts to serve the citizens of Magic Valley.

2. All of us should be aware of our country's need to reduce our dependence on foreign oil supplies. We reduced Trans IV's use of diesel by 20 percent in one step.

See Twin Falls, page 12

Like clouds of smoke, steam rises from the Brady Geothermal Power Plant located in the desert near Reno, Nev. Most of the geothermal electrical generation plants are located predominately in the northern part of the state. Currently, Nevada has 236 megawatts of generating capacity from 14 geothermal power plants at 10 different sites. ***(Photo by Warren Weihing)***

Energy from page 3

Idaho already has 70 direct-use geothermal sites producing 1,228 billion BTUs per year – equal to 204,000 barrels of oil.

By participating in the trade mission, Idaho's legislators learned how geothermal resources can be used, and how they can be proponents of new geothermal development in Idaho.

For more information, contact Ken Neely, technical hydrogeologist, or Warren Weihing, senior energy specialist, at the Idaho Department of Water Resources at (208) 327-7900 or by calling the Idaho Energy Hotline, **1-800-334-SAVE**. Additional information on geothermal resources in Idaho is also available at www.idahogeothermal.org.

Building Cx from page 7

contractors and designers to keep up with all of the changes in other disciplines that may affect theirs.

A Cx agent can help bridge that gap and prevent more costly changes after construction has begun. Some creative building owners, realizing that change orders are likely to decrease with more eyes in the design process, reduce the change order budget to pay for the Cx process.

Other building owners point to the reduced risk as the sole reason they have adopted Cx as standard practice. Robin Smith of Emory University says even though energy savings are achieved with optimally designed, installed, and tuned equipment in new buildings, the fact that the Cx process allows them to count on a fully functioning building upon occupancy is worth the cost alone. They have experienced fewer construction delays, cost overruns, and surprises in general.

More and more building owners are beginning to realize that buying cheap buildings typically results in higher lifetime costs. Spending a bit more time, effort, and even money, on the front end of a building project can save for years to come. The use of commissioning is one vital tool in fostering a "win-every-time" process in quality facility, and fiscal management.

About the author: *Mike Purcell works in the commercial building efficiency programs for the Energy Division.*

Federal, state agencies monitor Idaho's water supply

Data from the Natural Resource Conservation Service's SNOTEL system as of January 29 indicates that below normal snow packs exist over much of Idaho.

This does not look well for water supply prospects in many important irrigated areas in the southern half of the state. Basin average snow packs are very low in many areas including Oakley, 52 percent; Bear River, 59 percent; and the Salmon Falls basin, 61 percent in southern Idaho.

Only the Little Wood and Big Lost basins in central Idaho have above normal moisture contents at this time. In the northern half of the state, snow packs range near 60 percent of normal. The Upper Snake River basin is slightly better off at 77 percent, but still well below average.

"The dry summer and fall has left a soil moisture deficit across most of the state. Some rivers were at record low levels in November before this year's storms began," says Bill Ondrechen, hydrologist with the Idaho Department of Water Resources.

This moisture deficit will reduce the amount of stream flow that the snow pack yields this year. In addition, reservoir carryover storage is very low from last year's dry conditions. Combined storage at the end of December for 21 reservoirs throughout the state was the fourth lowest since 1958. Only 1992, 1994 and last year had less storage.

USDA Natural Resources Conservation Service
Snow Survey Data Collection Office
9173 West Barnes Drive, Suite C
Boise, ID 83709 208-378-5741

Based on Mountain Data from NRCS SNOWTEL Sites
As of Jan. 29, 2003

Basin	Snow Water Equivalent Percent of Average For Jan. 29, 2003	Precipitation October 1 to Current date Percent of Average
Idaho Panhandle Region	62	72
Clearwater Basin	64	68
Salmon Basin	85	81
Weiser Basin	86	89
Payette Basin	94	90
Boise Basin	83	81
Big Wood Basin	95	89
Little Wood Basin	118	107
Big Lost Basin	104	96
Little Lost, Birch Basins	72	63
Medicine Lodge, Beaver, Camas Basins	70	62
Henrys Fork, Teton Basins	78	74
Snake Basin Above Palisades	77	74
Willow, Blackfoot, Portneuf Basins	69	68
Oakley Basin	52	56
Salmon Falls Basin	61	62
Bruneau Basin	70	67
Owyhee Basin	73	70
Bear River Basin	59	65

The Snow Water Equivalent Percent of Average represents the snow water equivalent found at selected SNOTEL sites in or near the basin compared to the average value for those sites on this day.

The Total Precipitation Percent of Average represents the total precipitation (beginning October 1) found at selected SNOTEL sites in or near the basin compared to the average value for those sites on this day.

Remainder of season

Water users are urged to pay close attention to how the remainder of the accumulation season plays out for moisture and are urged to maintain close contact with their irrigation district or canal company personnel for specific details.

Many areas, such as the Bear River basin, will experience poor water supplies even if it gets normal moisture during the next few months.

"As of late January Idaho is more than half way through the accumulation period and it is unlikely that the existing shortfall can be made up in the next three months," says Ondrechen.

The SNOTEL chart to the left gives an overview of the conditions as of Jan. 29. A comprehensive update of this year's water supply conditions are available online from the NRCS at www.id.nrcs.usda.gov/snow.

Free booklet discusses fuel economy

Thinking about buying a new vehicle? Before you do, take a look at the 2003 Fuel Economy Guide published by the U.S. Department of Energy.

Why consider fuel economy? To save money, protect the environment and help strengthen national energy security. According to DOE …

- You could save between $300-$500 in fuel costs each year by choosing the most fuel-efficient vehicle in a particular class.
- By choosing a vehicle that achieves 25 miles per gallon rather than 20 mpg, you can prevent the release of about 15 tons of greenhouse gas pollution over the lifetime of your vehicle.
- Buying a more fuel-efficient vehicle can help strengthen your national energy security by reducing our dependence on foreign oil.

As in previous years, the guide is organized by fuel type, and then grouped by class. Within each class, vehicles are listed alphabetically by manufacturer and models.

The 21-page 2003 Fuel Economy Guide is available electronically at www.fueleconomy.gov; however, the file is quite large. The booklet is also free from the Energy Division by calling the Idaho Energy Hotline, **1-800-334-SAVE**, or by email at lcawley@idwr.state.id.us.

Twin Falls from page 9

3. We also considered the possible long-term economical benefits to rural Idaho. The successful development of crop-based fuels will improve one of Idaho's major industries – farming. It also has possibilities in the processing area for these fuels.

"When comparing these and many other positive results of a successful alternative crop based fuel against the one negative of slightly higher price," says Vining, "we felt it our civic duty to participate."

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